GHSQ-101 Multi Facility Security Systems Development and Installation

June 7, 2017
Facilities Committee Meeting
Background

- Security audit of NCPA facilities completed by CH2M Hill in 2015
  - Detailed site-by-site risk analysis
    - Threats & vulnerabilities
    - Location
    - Existing security systems
  - Cost – benefit analysis
  - Recommended actions
Audit - Risks & Vulnerabilities

- Sabotage
- Theft
- Unauthorized access
- Armed assailant
- Hunting / Shooting accident
- Loss of Communications
- Regulatory Compliance
- Nature
Audit - Recommendations

- Identified & analyzed improvements
  - All sites – Procedures
  - Specific site improvements – Security systems & other

### Step 7 - Risk/Resilience Management

<table>
<thead>
<tr>
<th>SORTED BY BENEFIT / COST</th>
<th>Cost of Improvement Option ($)</th>
<th>TOTAL = Annualized Risk Reduction</th>
<th>B/C Ratio</th>
<th>NPV @ Discount Rate ($)</th>
<th>Payback (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEC ALL</td>
<td>$15,000</td>
<td>$355,730</td>
<td>376.64</td>
<td>$6,869,727</td>
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<tr>
<td>LEC CT1-Alameda</td>
<td>$5,000</td>
<td>$118,577</td>
<td>376.64</td>
<td>$2,289,909</td>
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<tr>
<td>LEC CT2/LEC</td>
<td>$500</td>
<td>$6,613</td>
<td>210.05</td>
<td>$127,437</td>
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<td>LEC CT2/LEC</td>
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<td>$118,577</td>
<td>235.40</td>
<td>$2,286,251</td>
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<tr>
<td>LEC ALL</td>
<td>$10,000</td>
<td>$107,176</td>
<td>170.21</td>
<td>$2,063,057</td>
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<tr>
<td>LEC CT1-Alameda</td>
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<td>$5,591</td>
<td>177.60</td>
<td>$107,656</td>
<td>0.0</td>
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<tr>
<td>GEO GEO1</td>
<td>$15,000</td>
<td>$191,063</td>
<td>202.30</td>
<td>$3,681,279</td>
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<tr>
<td>LEC CT2/LEC</td>
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<td>64.90</td>
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<td>$420,885</td>
<td>163.03</td>
<td>$8,099,627</td>
<td>0.0</td>
</tr>
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</table>

Additional grating and racks placed on each side of back.
Example – New Spicer Meadows
Example – New Spicer Meadows

- **Risks**
  - Theft & sabotage

- **Vulnerabilities**
  - **Location**
    - Limited existing security
    - Unmanned & remote
    - Near public access/recreation
    - Physical layout

- **Other Considerations**
  - Dam safety requirements
  - Nature & weather
Example – New Spicer Meadows

- Security Improvements
  - Surveillance coverage
    - Top of dam – Long range thermal
    - Dam gate
    - Intake structure
    - Powerhouse gate & exterior
  - Intrusion Detection
    - Intake structure doors
    - Powerhouse interior
Project Scope

- Install Physical security systems across the CT, Geothermal and Hydroelectric NCPA facilities
  - Security systems:
    - Cameras, video monitors and video recording equipment
    - Intrusion and motion detection alarms
    - Access control
    - Servers, workstations & monitors, network equipment
  - Incorporate existing installed on-site security systems
  - Interface with NCPA HQ security systems
# Project Scope – Locations & Equipment

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>FACILITIES</th>
<th>EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geothermal</td>
<td>Front &amp; rear gates PLant 1 Plant 2 Steam field office Bear Canyon pump stations (4)</td>
<td>11 cameras 18 intrusion detectors &amp; access control 3 workstations</td>
</tr>
<tr>
<td>Combustion Turbines</td>
<td>CT1 Lodi CT1 Alameda LEC</td>
<td>18 cameras 16 intrusion detectors &amp; access control 3 workstations</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>Murphys office Collierville powerhouse &amp; switchyard Mckays dam New Spicer Meadows dam New Spicer Meadows powerhouse</td>
<td>19 cameras 13 intrusion detectors &amp; access control 3 workstations</td>
</tr>
</tbody>
</table>
Project Bidding

- Project contractor prequalification process, Nov 2016
  - Prequalify bidders per public works process
  - 6 Submittals, 4 Qualified

- Bid Process
  - December 12–15: Bid walks at plant locations
  - February 7: Public bid opening, 2 received
  - February 27: All bids declared non-responsive
  - March 1: Negotiations process begins
  - May 12: Final bids due
Evaluation of Bids

- Received two (2) bids on May 12

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Responsive</th>
<th>Exclusions</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark III Construction, Inc</td>
<td>Yes</td>
<td>No</td>
<td>$1,166,801</td>
</tr>
<tr>
<td>3D Datacom, Inc</td>
<td>Yes</td>
<td>No</td>
<td>$1,667,158</td>
</tr>
<tr>
<td>Burns &amp; McDonnell, Inc</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
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</table>

- Burns & McDonnell declined to bid
- Mark III was the low, responsive, responsible bidder
Evaluation of Bids

- Mark III
  - Lowest bidder
  - Sacramento-based general contractor
  - Proposed security software and hardware based on proprietary architecture, but match current NCPA systems and met specified functional requirements
  - Subcontracted RFI, who installed the security systems at NCPA Roseville and DRC facilities

- 3D Datacom
  - Significantly higher bid
  - Sacramento-based general contractor
  - Proposed security software and hardware open-systems based architecture and potentially easier to administer and expand. But implementation would require integration or replacement with existing NCPA security systems
### Fiscal Impact – By Plant

- **Current budgets, including encumbered funds:**

<table>
<thead>
<tr>
<th>Plant</th>
<th>Budget</th>
<th>Bid Amount</th>
<th>Bid Amount (+10% Contingency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geothermal</td>
<td>$408,923</td>
<td>$325,687</td>
<td>$358,256</td>
</tr>
<tr>
<td>CT1</td>
<td>$78,420</td>
<td>$272,764</td>
<td>$300,040</td>
</tr>
<tr>
<td>LEC</td>
<td>$182,878</td>
<td>$181,843</td>
<td>$200,027</td>
</tr>
<tr>
<td>Hydro</td>
<td>$298,435</td>
<td>$386,507</td>
<td>$425,158</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$969,270</strong></td>
<td><strong>$1,166,801</strong></td>
<td><strong>$1,283,481</strong></td>
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Construction Timelines

- June: Finalize contract
- July-August: Mobilization, material procurement, begin installation at LEC, Lodi and Alameda
- September: Begin installation at Geothermal
- October: Begin installation at Hydro
- November: Finish installation
- December: Turnover, training, demobilization
Recommendation

- Increase CT1 FY17-18 budget by $221,620 to address budgeted shortfall
- Authorize the General Manager to execute a public works agreement with Mark III Construction, Inc. and to issue purchase orders and change orders for not to exceed $1,283,481 for procurement and installation for GSHQ-101 Multi Facility Security Systems at NCPA Generation Services projects
Questions?
Backup Slides
Project Scope

- Combine CH2M Hill recommendations with NCPA analysis
  - Cost
  - Feasibility
  - Intent
  - Operational / day-to-day requirements
  - Existing systems
- Finalized project scope
Fiscal Impact – Breakout of CT1

- Current budgets, including encumbered funds:

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